

MAR. 28. 1912

Received at London Office

Date of writing Report 26th March 1912 When handed in at Local Office

Port of Bremen

No. in Survey held at
Reg. Book.

Date, First Survey 6th November 1910 Last Survey 25th March 1912

(Number of Visits 19)

Sup 56 on the *Steel & Co. Düsseldorf*Master *J. Schmitz*Built at *Geestmünde*By whom built *Jon. C. Tecklenborg & Co.*Gross 5877
Net 3728

When built 1912

Engines made at *Geestmünde*By whom made *Jon. C. Tecklenborg & Co.*

when made 1912

Boilers made at *Geestmünde*By whom made *Jon. C. Tecklenborg & Co.*

when made 1912

Registered Horse Power 697

Owners *Deutscher Australische Dampfschiffahrtsgesellschaft*Port belonging to *Hamburg*

Nom. Horse Power as per Section 28 697

Is Refrigerating Machinery fitted for cargo purposes *No*Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines *Triple compound surface condensing* No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders *27 1/2, 46 1/2, 78 3/4* Length of Stroke *53 1/2* Revs. per minute 75 Dia. of Screw shaft *16.57* Material of *1 1/2 in. steel*
as fitted *16.62* screw shaft
Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes* Is the after end of the liner made water tight
in the propeller boss *Yes* If the liner is in more than one length are the joints burned — If the liner does not fit tightly at the part
between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If two
liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush *10' - 3 3/16"*
Dia. of Tunnel shaft *14.96* as per rule *14.96* Dia. of Crank shaft journals *15.76* as per rule *15.76* Dia. of Crank pin *16 1/8* Size of Crank webs *10 1/4* Dia. of thrust shaft under
collars *15 3/4* Dia. of screw *19-10 3/16* Pitch of Screw *19-10 3/16* No. of Blades 4 State whether moveable *No* Total surface *122.66 sq ft*
No. of Feed pumps 2 Diameter of ditto *3 3/4* Stroke *27 1/16* Can one be overhauled while the other is at work *Yes*
No. of Bilge pumps 2 Diameter of ditto *4 5/16* Stroke *27 1/16* Can one be overhauled while the other is at work *Yes*
No. of Donkey Engines 4 Sizes of Pumps *7 1/8 x 10 1/4, 9 1/8 x 6 5/16, 4 5/16 x 5 1/4, 7 1/8 x 4 3/4* and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *5 in engine room & stokehold 4" dia.* In Holds, &c. *2 in each hold 4" dia., 1 in tunnel 4" dia.*

No. of Bilge Injections 1 sizes *1 1/2* Connected to condenser, or to circulating pump *Yes* Is a separate Donkey Suction fitted in Engine room & size *4" dia.*
Are all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine room always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *Yes*
Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *both*
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *Yes* Are the Discharge Pipes above or below the deep water line *above*
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel *Yes* Are the Blow Off Cocks fitted with a spigot and brass covering plate *Yes*
What pipes are carried through the bunkers *Bilge suction pipes* How are they protected *wooden casings*
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *Yes*
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *Yes*
Dates of examination of completion of fitting of Sea Connections *29.1.12* of Stern Tube *29.1.12* Screw shaft and Propeller *29.1.12*
Is the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door *Yes* worked from *Engine platform above deck.*

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel *Friedr. Krupp, Essen; Rheinische Stahlwerke, Düsseldorf; Lambach, Wittmann, Hamburg; Geestmünde, Geestmünde A.G. Geestmünde.*
Total Heating Surface of Boilers *8394 sq ft* Is Forced Draft fitted *Yes* No. and Description of Boilers *3 cylindrical multitubular*
Working Pressure *206 lb* Tested by hydraulic pressure to *412 lb* Date of test *30.11.12, 12.11.12* No. of Certificate *13, 14, 15*
Can each boiler be worked separately *Yes* Area of fire grate in each boiler *64.5 sq ft* No. and Description of Safety Valves to
each boiler *2 spring loaded* Area of each valve *2.18 sq in* Pressure to which they are adjusted *206 lb* Are they fitted with easing gear *Yes*
Smallest distance between boilers or uptakes and bunkers or woodwork *12 in* Mean dia. of boilers *5.2 3/4* Length *11.2 1/2* Material of shell plates *1 1/2 in. steel*
Thickness *1 1/32* Range of tensile strength *27.9-32.4* Are the shell plates welded or flanged *flanged* Descrip. of riveting: cir. seams *double*
long. seams *quadruple* Diameter of rivet holes in long. seams *7/16* Pitch of rivets *19 1/16* Lap of plates or width of butt straps *30 in*
Per centages of strength of longitudinal joint *93.5* Working pressure of shell by rules *213 lb* Size of manhole in shell *11 1/2 x 15 5/16*
Size of compensating ring *37 1/8 x 1 1/32* No. and Description of Furnaces in each boiler *3 Morison* Material *1 1/2 in. steel* Outside diameter *49 3/16*
Length of plain part *4 3/4* Thickness of plates *1 1/16* Description of longitudinal joint *welded* No. of strengthening rings
Working pressure of furnace by the rules *241 lb* Combustion chamber plates: Material *1 1/2 in. steel* Thickness: Sides *1 1/16* Back *2 1/32* Top *1 1/16* Bottom *6 1/64*
Pitch of stays to ditto: Sides *8 3/8 x 6 1/16* Back *7 1/4 x 6 1/16* Top *7 7/8 x 7 1/16* If stays are fitted with nuts or riveted heads *with* Working pressure by rules *287 lb*
Material of stays *1 1/2 in. steel* Diameter at smallest part *1 9/16* Area supported by each stay *48.8 sq in* Working pressure by rules *238 lb* End plates in steam space:
Material *1 1/2 in. steel* Thickness *1 1/16* Pitch of stays *4 x 15 1/32* How are stays secured *double with* Working pressure by rules *275 lb* Material of stays *1 1/2 in. steel*
Diameter at smallest part *2 1/32* Area supported by each stay *215 sq in* Working pressure by rules *285 lb* Material of Front plates at bottom *1 1/2 in. steel*
Thickness *1 3/32* Material of Lower back plate *1 1/2 in. steel* Thickness *6 3/64* Greatest pitch of stays *7 1/4* Working pressure of plate by rules *242 lb*
Diameter of tubes *2 3/4* Pitch of tubes *3 1/8 x 32 9/32* Material of tube plates *1 1/2 in. steel* Thickness: Front *1 3/32* Back *6 1/64* Mean pitch of stays *9 1/16*
Pitch across wide water spaces *13 3/4* Working pressures by rules *216 lb* Girders to Chamber tops: Material *1 1/2 in. steel* Depth and
thickness of girder at centre *10 1/4 x 1 1/16* Length as per rule *35 1/4* Distance apart *7 1/16* Number and pitch of stays in each *3-7 7/8*
Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

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Lloyd's Register
WR302-0071
Foundation

VERTICAL DONKEY BOILER—Manufacturers of Steel

No.	Description			When made	Where fixed
Made at	By whom made				
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length	
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:—1 crank shaft, 1 propeller shaft, 1 propeller, 1 crosshead bar, 1 crank pin, 1 set of coupling bolts, 2 slide valve spindles, 1 piston rod for air pump, 1 set of valves for air pump, 1 set of feed pump valves, 2 complete sets of links, 3 percent of condenser tubes with stuffing boxes, 2% of boiler tubes, 3 safety valve springs, 6 sets of gauge glasses, 10% cylinder cover bolts, 10% slide valve casing cover bolts, 10% piston bolts, 1 complete eccentric strap, 1 set of piston rings for each piston, 2 main bearing bolts, 1 set of bridge pump valves, 1 set of pin tools, bolts, nuts, washers, and iron of various sizes.

The foregoing is a correct description,

JON. C. TECKLENBURG A.G. Manufacturer.

Dates of Survey while building: During progress of work in shops - Nov 6, 11, 30, Dec 8, 15, 23, 28 Jan 3, 10, 24, Jan. 29, Feb 1, 6, 22, 28, March 8, 18, 20, 25
During erection on board vessel -
Total No. of visits 19

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 6.11.11/6.12.11 Slides 6.11.11/3.1.12 Covers 6.11.11 Pistons 6.11.11/3.1.12 Rods 6.11.11/3.1.12
Connecting rods 6.11.11 Crank shaft 10.1.12 Thrust shaft 10.1.12 Tunnel shafts 10.1.12 Screw shaft 10.1.12 Propeller 3.1.12
Stern tube 24.1.12/29.1.12 Steam pipes tested 8.3.12 Engine and boiler seatings 29.1.12 Engines holding down bolts 6.11.11
Completion of pumping arrangements 18.3.12 Boilers fixed 8.3.12 Engines tried under steam 20.3.12
Main boiler safety valves adjusted 20.3.12 Thickness of adjusting washers 29.1.12
Material of Crank shaft M. Steel Identification Mark on Do. 6951 Material of Thrust shaft M. Steel Identification Mark on Do. 6755
Material of Tunnel shafts M. Steel Identification Marks on Do. 3283/4544-4/6740/6734-6/6755-6-7/ Material of Screw shafts M. Steel Identification Marks on Do. 6952/6826
Material of Steam Pipes Steel Test pressure 412 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. These Engineer and Boiler have been manufactured under Special Survey in accordance with the Rule requirements and of good materials manufactured at approved works and tested by the Society's Surveyors as per Rules. The workmanship is good, all cast iron parts are of close fine grained quality and all hollow vessels such as cylinders, pumps, condenser etc have been tested by hydraulic pressure above their working pressure and found tight.

The main steam pipes, feed pipes and all other pipes have been tested by hydraulic pressure up to 412 lbs well hammered over and found tight.

The Boilers have been manufactured in accordance with the approved plans and the workmanship is good. They have been tested by hydraulic pressure of 412 lbs found tight, and carefully gauged while under test showed no alteration of form. Under steam the Boilers are tight and the Safety valves lift freely at 206 lbs.

These Engineer and Boiler are eligible in my opinion to be classed in the Register Book with the notation of LMC 3.12.

The amount of Entry Fee .. Mk 62.-
Special £ 1125.-
Donkey Boiler Fee £ 43.-
Travelling Expenses (if any) £ 20.-
When applied for, 26.3.1912
When received, 2.4.1912
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
Assigned
+ LMC 3.12
FRI. MAR. 29. 1912
J.D.